APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,667	01/11/2002	Brian C. Barnes	2000.057000/TT4090	9420

23720   7590   05/12/2008

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EXAMINER
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ART UNIT	PAPER NUMBER
2194	

MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/044,667	BARNES ET AL.
	Examiner	Art Unit
	VAN H. NGUYEN	2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2008*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☒ Claim(s) *8-11 and 24* is/are allowed.
6)☒ Claim(s) *1-3,12-19,25 and 26* is/are rejected.
7)☒ Claim(s) *4-7 and 20-23* is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to the amendment filed 02/07/2008.

Claims 1-26 are currently pending in this application.

Cross-referenced Application information must accurately reflect the relevant status of

related cases. Applicant should review the related cases and provide appropriate

amendments to reflect the current information on each case with relevancy to the instant

Application.

Indication of Allowable Subject Matter

2.   Claims 4-7 and 20-23 are objected to as being dependent upon a rejected base claim, but

would be allowable if rewritten in independent form including all of the limitations of the

base claim and any intervening claims, subject to a final search.

Claims 8-11 and 24 appear to be allowable over the prior art of record, subject to a final

search.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 12-19, 25, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by

Rechef et al. (US 6199181 B1). The Rechef reference was cited by the Examiner in the

previous office Action.

<u>**As to claim 1:**</u>

Rechef teaches a method *(a method and system for establishing and maintaining a*

restricted operating environment for a computer program to prevent the program from

exploiting bugs and/or data of another computer program which shares the same

hardware, while at the same time allowing some form of restricted, well-controlled

communication between the programs/provide true protection of multiple computer

programs and operating systems executing simultaneously from untrusted and potentially

rogue programs and operating systems) [see Figs.2-9 and the associated text],

comprising:

- executing a software object *(program/computer program)* *[see col. 1, lines 16-24 and col.3, line 15-col.4, line 44; see also, Figs. 2-9 and the associated text]*;

- establishing a security level *(security level)* for the software object *[see col. 1, lines 16-24 and col.3, line 15-col.4, line 44; see also, Figs. 2-9 and the associated text]*; and

- performing a virtual address based memory access using the security level, performing

  the virtual address based memory access comprising using a secondary table and

  at least one virtual memory table *(see the physical memory/virtual memory/security level/ tables/virtual memory tables discussions beginning at col.8, line 4).*

As to claim 2:

Rechef teaches using a processor *(a processor)* to process software code of the software

object *(see the abstract; see also, Figs. 2-9 and the associated text).*

As to claim 3:

Rechef teaches assigning a security level relating to a memory access of at least a portion

of a memory *(see the physical memory/virtual memory/security level/segmentation*

discussions beginning at col.8, line 4; see also, Figs. 2-9 and the associated text).

As to claim 25:

Rechef teaches executing a function of the object based upon the virtual address based memory *(see the physical memory/virtual memory/virtual memory table discussions beginning at col.8, line 4; see also, Figs. 2-9 and the associated text).*

As to claim 12:

Note the rejection of claim 1 above. Claim 12 is the same as claim 1, except claim 12 is an apparatus claim and claim 1 is a method claim.

As to claims 17-19, and 26:

Note the rejection of claims 1-3, and 25 respectively. Claims 17-19, and 26 are the same as claims 1-3, and 25, except claims 17-19, and 26 are computer readable claims and claims 1-3, and 25 are method claims.

As to claim 13:

The rejection of claim 1 above is incorporated herein in full. Additionally, Rechef further teaches a processor *(processor)*, a bus *(bus)*, a memory unit *(memory),* and a memory access interface is inherent to the system of Rechef.

As to claim 14:

Rechef teaches at least one microprocessor *(CPU).*

As to claim 15:

Note the discussion of claim 1 above for rejection.

As to claim 16:

Rechef teaches the memory unit comprises, among other things, a random access

memory *(RAM)*.

Response to Arguments

4.   Applicant's arguments filed 02/01/2008 have been fully considered but they are not

persuasive.

Applicant argued in substance that Rechef does not teach establishing a security level for

the software object (Remarks; p. 13).

In response, Rechef's teaching *"allows an implementation of a security policy wherein a*

first operating system or program has a different trust level or security level than a

second or plurality of operating systems or programs which share the same hardware.

While maintaining several programs with potentially different trust levels on the same

processor, and keeping those programs separated by means of hardware mechanisms

provided by the processor" covers the claimed *"establishing a security level for the*

software object".

Also, Applicant argued in substance that Rechef does not anticipate or suggest

performing the virtual address memory access based upon a secondary table and at least

one virtual memory table (Remarks; p. 13).

In response, Rechef does teach performing the virtual address memory access based upon

a secondary table and at least one virtual memory table *(For each cell 204, an executable*

program 306 is loaded into physical memory. Memory is allocated for each cell 204, as

well as hardware resources, CPU timing, interrupt vectors and any other resource

supported directly by the CPU for the program cell 204. Master 202 then constructs each

Cell by first setting up the CPU's protection, including I/O permission tables, virtual

memory tables, interrupt re-direction maps, task tables, segmentation tables, etc., to

isolate the program 306 from any memory or hardware except that allocated to it by

master 202... allocating memory also comprises creating a virtual memory mapping

table. When the program 306 loads, the program 306 is not aware of any memory above

or below the space allocated in RAM for the particular cell 204 the program 306 has

been loaded in. To the program 306, the lower end of memory ... The table translates

memory access interrupt calls from the program 306 to the physical memory address so

that only the data allocated to that cell 204 is read or written... Tasks are initiated with

allocated memory pages for each O/S which is to be loaded... each memory page is

installed with a virtual memory address table so that the O/S is not aware of any other

memory space other than that allocated to it).

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the mailing date of this final action.

Contact Information

6.   Any inquiry or a general nature or relating to the status of this application should
        be directed to the TC 2100 Group receptionist: (571) 272-2100.

        Any inquiry concerning this communication or earlier communications from the
        examiner should be directed to Van H. Nguyen whose telephone number is (571) 272-
        3765. The examiner can normally be reached on Monday-Thursday from 8:30AM-
        6:00PM. The examiner can also be reached on alternative Friday. If attempts to reach the
        examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be
        reached at (571) 272-3756.

        The fax phone number for the organization where this application or proceeding is
        assigned is (571) 273-8300.

        Information regarding the status of an application may be obtained from the Patent
        Application Information Retrieval (PAIR) system. Status information for published
        applications may be obtained from either Private PAIR or Public PAIR. Status
        information for unpublished applications is available through Private PAIR only. For
        more information about the PAIR system, see http://pair-direct.uspto.gov. Should you
        have questions on access to the Private PAIR system, contact the Electronic Business
        Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO
        Customer Service Representative or access to the automated information system, call
        800-786-9199 (IN USA OR CANADA) or 571-272-1000.

        /VAN H NGUYEN/
        Primary Examiner, Art Unit 2194